

Application No. 09/529,654

Response to Office communication dated 04/11/2005

**Amendment to the Claims:**

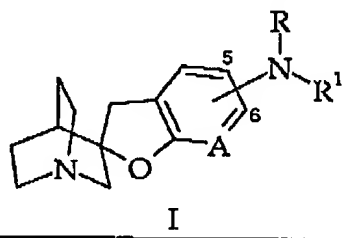
This listing of claims will replace all previous versions, and listings, of claims in this application.

**Listing of Claims:**

Claims 1 - 57 (cancelled).

Claim 58 (currently amended)

A compound according to claim 57, wherein of formula I,



wherein

NRR¹ is attached at the 5- or 6-position of the furopyridine ring;

R is hydrogen, C₁-C₄ alkyl, or COR²;

R¹ is -CH₂CH=CHAr

n is 0 to 3;

A is N;

Ar is a 5- or 6-membered aromatic or heteroaromatic ring which contains zero to four nitrogen atoms, zero to one oxygen atoms, and zero to one sulfur atoms which aromatic or heteroaromatic ring is optionally substituted with one to two substituents independently selected from: halogen, trifluoromethyl, or C₁-C₄alkyl;

R² is hydrogen, C₁-C₄alkyl; C₁-C₄alkoxy; or a phenyl ring optionally substituted with one to three of the following substituents: halogen, C₁-C₄alkyl, C₂-C₄alkenyl, C₂-C₄alkynyl, OH, -OC₁-C₄alkyl, -CO₂R⁵, -CN, -NO₂, -NR³R⁴, or -CF₃;

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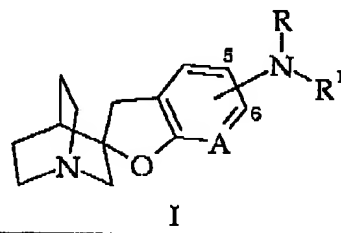
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R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are independently hydrogen; C<sub>1</sub>-C<sub>4</sub>alkyl; or a phenyl ring optionally substituted with one to three of the following substituent: halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>2</sub>-C<sub>4</sub>alkenyl, C<sub>2</sub>-C<sub>4</sub>alkynyl, -OH, -OC<sub>1</sub>-C<sub>4</sub>alkyl, -CN, -NO<sub>2</sub>, or -CF<sub>3</sub>;

or an enantiomer thereof, or a pharmaceutically acceptable salt thereof.

Claim 59 (currently amended)

A compound according to claim 57, wherein of formula I,



wherein

NR<sup>1</sup>R is attached at the 5- or 6-position of the furopyridine ring;

R is hydrogen, C<sub>1</sub>-C<sub>4</sub> alkyl, or COR<sup>2</sup>;

R<sup>1</sup> is -CH<sub>2</sub>CH=CHAr

n is 0 to 3;

A is N;

Ar is a 5- or 6-membered aromatic or heteroaromatic ring which contains zero to four nitrogen atoms, zero to one oxygen atoms, and zero to one sulfur atoms which aromatic or heteroaromatic ring is optionally substituted with one to two substituents independently selected from: halogen, trifluoromethyl, or C<sub>1</sub>-C<sub>4</sub>alkyl;

R<sup>2</sup> is hydrogen, C<sub>1</sub>-C<sub>4</sub>alkyl; C<sub>1</sub>-C<sub>4</sub>alkoxy; or a phenyl ring optionally substituted with one to three of the following substituents: halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>2</sub>-C<sub>4</sub>alkenyl, C<sub>2</sub>-C<sub>4</sub>alkynyl, OH, -OC<sub>1</sub>-C<sub>4</sub>alkyl, -CO<sub>2</sub>R<sup>5</sup>, -CN, -NO<sub>2</sub>, -NR<sup>3</sup>R<sup>4</sup>, or -CF<sub>3</sub>;

R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are independently hydrogen; C<sub>1</sub>-C<sub>4</sub>alkyl; or a phenyl ring optionally substituted with one to three of the following substituent: halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>2</sub>-C<sub>4</sub>alkenyl, C<sub>2</sub>-C<sub>4</sub>alkynyl, -OH, -OC<sub>1</sub>-C<sub>4</sub>alkyl, -CN, -NO<sub>2</sub>, or -CF<sub>3</sub>;

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..... or an enantiomer thereof, or a pharmaceutically acceptable salt thereof.

Claim 60 (cancelled)

Claim 61 (currently amended)      A compound selected from ~~according to claim 57~~, said compound being:

R-(-)-5'-(2-pyridylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

R-(-)-5'-(3-pyridylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine][, or];

R-(-)-5'-(4-pyridylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

R-(-)-5'-(2-furanylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

R-(-)-5'-(3-furanylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

R-(-)-5'-(2-thienylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

R-(-)-5'-(2-imidazolylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

R-(-)-5'-N-(3-pyridyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

R-(-)-5'-N-(3-thienylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

R-(-)-5'-N-(imidazol-4-ylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

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R-(-)-5'-N-(thiazol-2-ylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

R-(-)-5'-N-[trans-3-(4-pyridinyl)prop-2-enyl]aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

R-(-)-5'-N-acetyl-N-(3-thienylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

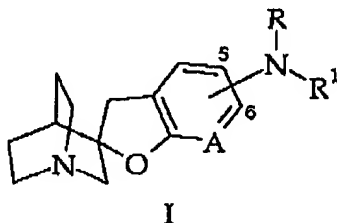
R-(-)-5'-N-methyl-N-(4-pyridylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine], or

R-(-)-5'-N-methyl-N-(3-pyridylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

or an enantiomer thereof, or a pharmaceutically-acceptable salt thereof.

Claim 62 (cancelled)

Claim 63 (previously presented) A compound of formula I,



wherein

$\text{NRR}^1$  is attached at the 5- or 6-position of the furopyridine ring;

R is hydrogen,  $\text{C}_1\text{-C}_4$ alkyl, or  $\text{COR}^2$ ;

$\text{R}^1$  is  $(\text{CH}_2)_n\text{Ar}$ ,  $\text{CH}_2\text{CH}=\text{CHAr}$ , or  $\text{CH}_2\text{C}=\text{CAr}$ ;

n is 0 to 3;

A is N;

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Ar is an 8-, 9- or 10-membered fused aromatic or heteroaromatic ring system containing zero to four nitrogen atoms, zero to one oxygen atoms, and zero to one sulfur atoms which fused aromatic or heteroaromatic ring system is optionally substituted with one to two substituents independently selected from: halogen, trifluoromethyl, or C<sub>1</sub>-C<sub>4</sub>alkyl;

R<sup>2</sup> is hydrogen, C<sub>1</sub>-C<sub>4</sub>alkyl; C<sub>1</sub>-C<sub>4</sub>alkoxy; or a phenyl ring optionally substituted with one to three of the following substituents: halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>2</sub>-C<sub>4</sub>alkenyl, C<sub>2</sub>-C<sub>4</sub>alkynyl, OH, -OC<sub>1</sub>-C<sub>4</sub>alkyl, -CO<sub>2</sub>R<sup>5</sup>, -CN, -NO<sub>2</sub>, -NR<sup>3</sup>R<sup>4</sup>, or -CF<sub>3</sub>;

R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are independently hydrogen; C<sub>1</sub>-C<sub>4</sub>alkyl; or a phenyl ring optionally substituted with one to three of the following substituents: halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>2</sub>-C<sub>4</sub>alkenyl, C<sub>2</sub>-C<sub>4</sub>alkynyl, -OH, -OC<sub>1</sub>-C<sub>4</sub>alkyl, -CN, -NO<sub>2</sub>, or -CF<sub>3</sub>;

or an enantiomer thereof, or a pharmaceutically acceptable salt thereof.

Claim 64 (previously presented)      A compound according to claim 63, wherein R<sup>1</sup> is -CH<sub>2</sub>CH=CHAr.

Claim 65 (previously presented)      A compound according to claim 63, wherein R<sup>1</sup> is -CH<sub>2</sub>CH=CHAr.

Claim 66 (previously presented)      A compound according to claim 63, wherein R<sup>1</sup> is -(C<sub>11</sub>)<sub>n</sub>Ar.

Claim 67 (previously presented)      A compound according to claim 63, said compound being:  
R-(-)-5'-N-(quinolin-3-ylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

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R-(-)-5'-N-(quinolin-4-ylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine], or

R-(-)-5'-N-(1,4-benzodioxan-6-ylmethyl)aminospiro[1-azabicyclo[2.2.2]octane-3,2'-(3'H)-furo[2,3-b]pyridine];

or an enantiomer thereof, or a pharmaceutically acceptable salt thereof.

Claim 68 (previously presented) A compound according to claim 63, wherein Ar is selected from 1-, or 2-naphthyl,

2-, 3-, 4-, 5-, 6-, 7-, or 8-quinolyl,

1-, 3-, 4-, 5-, 6-, 7-, or 8-isoquinolyl,

2-, 4-, 5-, 6-, or 7-benzoxazolyl, or

3-, 4-, 5-, 6-, or 7-benzisoxazolyl,

or an enantiomer thereof, or a pharmaceutically acceptable salt thereof.

Claim 69 (previously presented) A pharmaceutical composition comprising a compound according to claim 63, in admixture with an inert pharmaceutically-acceptable diluent or carrier.